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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,994	03/29/2001	Jerome D. Carter	42390P10400	6733

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EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/22/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,994

Applicant(s)

JEROME D. CARTER

Examiner

Brian T. Pendleton

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7-9, 12-15, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose et al. Rose et al teach an emergency vehicle detection system comprising front sensor 14 and rear sensor 16 (microphones) and alert display 26 for notifying the driver of the vehicle of the occurrence of a detected sound. Claim 1 is met. As to claim 2, the sound detected is an emergency vehicle (see abstract). Per claims 7 and 8, the sound is detected using high pass filter 38, which is used to pass only high frequency sounds above 1 kHz which include siren sounds from emergency vehicles (see column 4 lines 34-40). Regarding claim 9, the high pass filter 38 processes the sound. Per claim 12, the warning indicator is the alert display 26. As to claim 13, the apparatus detects high frequency siren sounds and informs the occupant of the vehicle using alert display 26. Regarding claims 14 and 15, the siren sounds are captured by microphones 14 and 16 and filtered by high pass filter 38 to see if the external sound

comprises a predetermined characteristic (higher than 1 kHz). Similarly, claim 18 requires a microphone and processing unit, read upon by microphones 14 and 16 and high pass filter 38 and level detector 40. As to claim 20, the combination of the filter 38 and detector 40 is to determine if external sounds correspond to emergency vehicles.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Cornett et al. Cornett et al teach an apparatus for warning the driver of a vehicle of emergency vehicles comprising microphone M, sensor circuitry SS having band pass filter 10 for filtering the picked-up sound around the siren frequency range (see abstract), and alarm 21 for notifying the vehicle's occupant. Claims 1 and 2 are met. As to claim 5, the abstract also discloses that the vehicle's sound system is disabled in the event of an approaching emergency vehicle.

Claims 1, 2, 6 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilhelm. Wilhelm discloses a method of signaling traffic relevant information such as warning signals from police sirens (see column 3 lines 28-39) to an occupant of a vehicle. The method calls for detecting the information using microphones 1 and in the case of a mobile telephone 12 (portable communication device) disabling its normal function. Read abstract. Claims 1, 2 and 6 are met. As to claim 11, column 4 lines 27-32 taught an automatic announcement which is broadcast in the instance of detecting a sound outside of the vehicle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornett et al in view of Garvis. Cornett et al teach a system for notifying the occupant of a vehicle the sound detected by microphones are associated with an emergency vehicle. Cornett et al do not teach that the sound detected is broadcast through the sound system of the vehicle or through headphones. However, as evidenced by Garvis, that feature was well known at the time of invention. Taught in column 1 lines 28-39, it was advantageous recreate external sounds over the radio or interrupt the radio and produce the sounds to alert vehicle occupants who are unable to hear the emergency vehicle's sirens. This feature made driving safer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to reproduce the sounds picked up by microphone M or Cornett et al through the vehicle's sound system. Claims 3, 17 and 19 are met with the combination of Cornett et al and Garvis. As to claim 4, Garvis also teaches a headphone sound system which uses a switching circuit in interrupt circuit 30 to disable a sound source 16 when extraneous sounds picked up by a microphone 32 have a signal level above a predetermined threshold. External sounds are then heard in lieu of the sound source 16. It was obvious to also include this feature in the invention of Cornett et al since headphones made it difficult to hear emergency vehicle sirens.

Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al in view of McConnell et al. Rose et al teach an emergency vehicle detection system comprising microphones, filters, and processing units. Rose et al do not disclose that the sound processing includes converting the sound into digital sound. Examiner takes Official Notice that digital processing was well known in the art at the time of invention. It was advantageous to use because it was a more accurate and quicker processing methodology. McConnell et al teach detecting a siren using microphone 1, analog-to-digital converter 4, bandpass filter 5 and a plurality of detectors 9-12 for detecting predetermined patterns of known sirens. Therefore in the same field of endeavor it was obvious to use digital signal processing and look for predetermined characteristics (patterns) of the input digital signal for detecting sirens. Claims 10 and 16 are met.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hartzell, US Patent 5,926,112.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton
December 12, 2003



XU MEI
PRIMARY EXAMINER